CURRENT CLAIMS

A copy of the claims is provided for the convenience of the Examiner. The claims are not amended.

1.   (Original)   For use with a network transceiver having a decoder and an encoder, a controller that controls operating modes of the network transceiver, comprising:

an encoder portion operable to direct said encoder to encode data in one of an industry-compliant mode and a custom mode; and

a decoder portion operable, in response to sensing data received in said custom mode at said decoder, to direct:

said decoder to decode said received data in said custom mode and

said encoder portion to direct said encoder to encode data in said custom mode.

2.   (Original)   The controller for use with a network transceiver as recited in Claim 1 further comprising a state machine that includes at least two alternate states indicating whether said custom mode is enabled.

3.   (Original)   The controller for use with a network transceiver as recited in Claim 1 wherein at least said decoder portion is embodied in a peripheral card that is couplable to a computer system to allow said computer system to process said decoded data.

4.   (Original)   The controller for use with a network transceiver as recited in Claim 1 further comprising a reset portion that is operable to direct said controller to reset said operating mode of the network transceiver to said industry-compliant mode.

5.   (Original)   The controller for use with a network transceiver as recited in Claim 4 wherein said reset portion is associated with said decoder portion and operates to direct said decoder portion to direct:

said decoder to decode said received data in said industry-compliant mode and

said encoder portion to direct said encoder to encode data in said industry-compliant mode.

6.   (Original)   The controller for use with a network transceiver as recited in Claim 1 wherein said decoder portion is further operable, in response to sensing data received in said industry-compliant mode at said decoder, to direct said decoder to decode said received data from said industry-compliant mode.

7.   (Original)   The controller for use with a network transceiver as recited in Claim 6 wherein said decoder portion is further operable to direct said encoder portion to control data transmission from said encoder in said industry-compliant mode.

8.   (Original)   The controller for use with a network transceiver as recited in Claim 1 wherein said industry-compliant mode is compliant with IEEE 802.3ab.

9.   (Original)   For use with a network transceiver having a decoder, an encoder, and a controller associated therewith, a method of operating said controller to allow operating modes of the network transceiver to be monitored and controlled, said method comprising the steps of:

sensing data received at said decoder in one of an industry-compliant mode and a custom mode; and

directing said encoder, in response to sensing data received in said custom mode at said decoder, to encode data in said custom mode.

10.   (Original)   The method of operating the controller as recited in Claim 9 wherein said directing step further comprises directing said decoder to decode said received data from said custom mode.

11.   (Original)   The method of operating the controller as recited in Claim 9 further comprising the step of using a state machine having at least two alternate states to indicate whether said custom mode is enabled.

12.   (Original)   The method of operating the controller as recited in Claim 9 wherein at least a decoder portion of the controller is embodied in a peripheral card that is couplable to a computer system and said method further comprises the step of controlling communication of said decoded data from the network transceiver to said computer system.

13.   (Original)   The method of operating the controller as recited in Claim 9 further comprising the step of resetting said operating mode of the network transceiver to said industry-compliant mode.

14.   (Original)   The method of operating the controller as recited in Claim 13 wherein said resetting step comprises the step of directing:

said decoder to decode said received data from said industry-compliant mode and

said encoder to encode data in said industry-compliant mode.

15.   (Original)   The method of operating the controller as recited in Claim 9 wherein said directing step further comprises directing said encoder, in response to sensing data received in said industry-compliant mode at said decoder, to encode data in said industry-compliant mode.

16.   (Original)   The method of operating the controller as recited in Claim 9 wherein said directing step further comprises directing said decoder, in response to sensing data received in said industry-compliant mode at said decoder, to decode received data from said industry-compliant mode.

17.   (Original)   The method of operating the controller as recited in Claim 9 wherein said industry-compliant mode is compliant with IEEE 802.3ab.

18.   (Original)   A network transceiver that is couplable to a computer system, comprising:

an encoder that encodes data to be transmitted by said network transceiver;

a decoder that decodes data received by said network transceiver; and

a controller, associated with said decoder and said encoder, that controls operating modes of said network transceiver, comprising:

an encoder portion operable to direct said encoder to encode data in one of an industry-compliant mode and a custom mode; and

a decoder portion operable, in response to sensing data received in said custom mode at said decoder, to direct:

said decoder to decode said received data in said custom mode and

said encoder portion to direct said encoder to encode data in said custom mode.

19. (Original) The network transceiver as recited in Claim 18 further comprising a state machine that includes at least two alternate states indicating whether said custom mode is enabled.

20. (Original) The network transceiver as recited in Claim 18 wherein at least said decoder portion is embodied in a peripheral card that is couplable to the computer system to allow the computer system to process said decoded data.

21. (Original) The network transceiver as recited in Claim 18 wherein said controller further comprises a reset portion that is operable to direct said controller to reset said operating mode of the network transceiver to said industry-compliant mode.

22. (Original) The network transceiver as recited in Claim 21 wherein said reset portion is associated with said decoder portion and operates to direct said decoder portion to direct:

said decoder to decode said received data in said industry-compliant mode; and

said encoder portion to direct said encoder to encode data in said industry-compliant mode.

23. (Original)   The network transceiver as recited in Claim 18 wherein said decoder portion is further operable, in response to sensing data received in said industry-compliant mode at said decoder, to direct said decoder to decode said received data from said industry-compliant mode.

24. (Original)   The network transceiver as recited in Claim 23 wherein said decoder portion is further operable to direct said encoder portion to control data transmission from said encoder in said industry-compliant mode.

25. (Original)   The network transceiver as recited in Claim 18 wherein said industry-compliant mode is compliant with IEEE 802.3ab.

26. (Original)   For use with a computer system having a network transceiver, a method of operating said network transceiver to allow operating modes thereof to be monitored and controlled, said method comprising the steps of:

sensing data received at a decoder associated with said network transceiver in one of an industry-compliant mode and a custom mode; and

encoding data to be transmitted by said network transceiver in response to sensing data received at said decoder in said custom mode.

27.   (Original)   The method of operating the network transceiver as recited in Claim 26 further comprising the step of decoding data in response to sensing data received at said decoder in said custom mode.

28.   (Original)   The method of operating the network transceiver as recited in Claim 26 further comprising the step of encoding data in said industry-compliant mode.

29.   (Original)   The method of operating the network transceiver as recited in Claim 26 further comprising the step of decoding data in said industry-compliant mode.

30.   (Original)   The method of operating the network transceiver as recited in Claim 26 wherein the network transceiver comprises a controller associated with said decoder and said encoder, and said method further comprises the step of using said controller to direct said encoder to encode data in one of an industry-compliant mode and said custom mode.

31.   (Original)   The method of operating the network transceiver as recited in Claim 30 wherein said using step further comprises directing said decoder to decode said received data from said custom mode.

32.   (Original)   The method of operating the network transceiver as recited in Claim 26 further comprising the step of using a state machine having at least two alternate states to indicate whether said custom mode is enabled.

33.   (Original)   The method of operating the network transceiver as recited in Claim 26 wherein at least a portion of the network transceiver is embodied in a peripheral card that is couplable to a computer system and said method further comprises the step of controlling communication of said decoded data from the network transceiver to the computer system.

34.   (Original)   The method of operating the network transceiver as recited in Claim 26 further comprising the step of resetting said operating mode of the network transceiver to said industry-compliant mode.

35.   (Original)   The method of operating the network transceiver as recited in Claim 34 wherein said resetting step comprises the steps of directing:

said decoder to decode said received data in said industry-compliant mode and

said encoder to encode data in said industry-compliant mode.

36. (Original) The method of operating the network transceiver as recited in Claim 26 further comprising the step of directing said encoder, in response to sensing data received in said industry-compliant mode at said decoder, to encode data in said industry-compliant mode.

37. (Original) The method of operating the network transceiver as recited in Claim 26 further comprising the step of directing said decoder, in response to sensing data received in said industry-compliant mode at said decoder, to decode received data from said industry-compliant mode.

38. (Original) The method of operating the network transceiver as recited in Claim 26 wherein said industry-compliant mode is compliant with IEEE 802.3ab.

39. (Original) A computer system for association with an Ethernet network, comprising:

a processing unit;

a memory, associated with said processing unit;

an Ethernet transceiver, associated with said processing unit and said memory, that associates said computer system with said Ethernet network, said Ethernet transceiver comprising:

an encoder that encodes data to be transmitted by said Ethernet transceiver over said Ethernet network;

a decoder that decodes data received by said Ethernet transceiver over said Ethernet network; and

a controller, associated with said decoder and said encoder, for controlling operating modes of said Ethernet transceiver, said controller operable to (i) negotiate a communications channel between said computer system and another computer system associated with said Ethernet network, said computer system entering one of a master state and a slave state, (ii) direct, in response to entering said master state, said encoder to encode data to be transmitted to said another computer in an industry-compliant mode and, if said encoded data is not properly received by said another computer, to encode data to be transmitted to said another computer in a custom mode, (iii) direct, in response to entering said slave state, said decoder to decode data received from said another computer in said industry-compliant mode and, if said received data cannot properly be decoded, to decode said received data in said custom mode.

40. (Original)   The computer system as recited in Claim 39 wherein said controller is further operable to direct, in response to entering said master state, said decoder to decode data received from said another computer in one of said industry-compliant mode and said custom mode.

41. (Original)   The computer system as recited in Claim 39 wherein said controller is further operable to direct, in response to entering said slave state, said encoder to encode data to be transmitted to said another computer in one of said industry-compliant mode and said custom mode.

42. (Original)   The computer system as recited in Claim 39 wherein said controller is further operable to direct, in response to entering said slave state, said encoder to encode data to be transmitted to said another computer in one of said industry-compliant mode and said custom mode.

43.   (Original)   A computer system for association with an Ethernet network, comprising:

a processing unit;

a memory, associated with said processing unit;

an Ethernet transceiver, associated with said processing unit and said memory, that associates said computer system with said Ethernet network, said Ethernet transceiver comprising:

an encoder that encodes data to be transmitted by said Ethernet transceiver over said Ethernet network;

a decoder that decodes data received by said Ethernet transceiver over said Ethernet network; and

a controller, associated with said decoder and said encoder, for controlling operating modes of said Ethernet transceiver, said controller operable to (i) negotiate a communications channel between said computer system and another computer system associated with said Ethernet network, said computer system entering one of a master state and a slave state, (ii) direct, in response to entering said master state, said encoder to encode data to be transmitted to said another computer in a custom mode and, if said encoded data is not properly received by said another computer, to encode data to be transmitted to said another computer in an industry-compliant mode, (iii) direct, in response to entering said slave state, said decoder to decode data received from said another computer in said custom mode and, if said received data cannot properly be decoded, to decode said received data in said industry-compliant mode.

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44. (Original) The computer system as recited in Claim 43 wherein said controller is further operable to direct, in response to entering said master state, said decoder to decode data received from said another computer in one of said industry-compliant mode and said custom mode.

45. (Original) The computer system as recited in Claim 43 wherein said controller is further operable to direct, in response to entering said slave state, said encoder to encode data to be transmitted to said another computer in one of said industry-compliant mode and said custom mode.

46. (Original) The computer system as recited in Claim 43 wherein said controller is further operable to direct, in response to entering said slave state, said encoder to encode data to be transmitted to said another computer in one of said industry-compliant mode and said custom mode.

47. (Original) A computer system for association with an Ethernet network, comprising:

a processing unit;

a memory, associated with said processing unit;

an Ethernet transceiver, associated with said processing unit and said memory, that associates said computer system with said Ethernet network, said Ethernet transceiver comprising:

an encoder that encodes data to be transmitted by said Ethernet transceiver over said Ethernet network;

a decoder that decodes data received by said Ethernet transceiver over said Ethernet network; and

a controller, associated with said decoder and said encoder, for controlling operating modes of said Ethernet transceiver, said controller (i) negotiates a communications channel between said computer system and another computer system associated with said Ethernet network, said computer system entering one of a master state and a slave state, and (ii) repeatedly directs, in response to entering one of said master state and said slave state, said encoder to encode data to be transmitted to said another computer in one of an industry-compliant mode and a custom mode until said encoded data is properly received by said another computer.

48. (Original)   The computer system as recited in Claim 47 wherein said controller is further operable to decode data received from said another computer in one of said custom mode and said industry-compliant mode.

49. (Original)   The computer system as recited in Claim 47 wherein said controller is further operable to terminate said repeatedly encoding data in said one of an industry-compliant mode and a custom mode as a function of a threshold.

50. (Original)   The computer system as recited in Claim 47 wherein said controller is further operable to randomly select one of said industry-compliant mode and said custom mode and to encode data to be transmitted to said another computer in said randomly selected one of said industry-compliant mode and said custom mode.

51. (Original)   The computer system as recited in Claim 47 wherein said controller is further operable to randomly select one of said industry-compliant mode and said custom mode in response to said encoded data is not properly received by said another computer and to encode data to be transmitted to said another computer in said randomly selected one of said industry-compliant mode and said custom mode.